

IN THE CLAIMS:

Please amend the claims as presented in the below listing of claims. This listing replaces any previous listing of claims.

1. (Currently Amended) A method for simulating one or more components, comprising:
 - establishing an engineering model of a component ~~of a machine~~
 - ~~that is configured to perform work operations in a work environment;~~
 - receiving selection data for configuring the component from a user;
 - lightening the engineering model using a model reduction process;
 - establishing a web-based model of the component based on the selection data and the lightened engineering model; and
 - performing a simulation of the web-based model.
2. (Currently Amended) The method of claim 1, wherein performing the simulation of the web-based model includes:
 - performing the simulation of the web-based model in a simulation environment such that the user may manipulate the web-based model over a network to perform virtual operations ~~associated with the work environment.~~
3. (Previously Presented) The method of claim 1, further including:
 - receiving the selection data from the user over a network; and

providing, to the user over the network, feedback data reflecting characteristics of the web-based model during the simulation.

4 (Original) The method of claim 1, wherein receiving selection data includes:

providing an option to the user reflecting a sub-component that may be associated with the component, wherein the selection data includes the sub component selected by the user.

5. (Original) The method of claim 4, wherein providing an option further includes:

providing, to the user, a web-based model of the sub-component based on a corresponding engineering model of the sub-component.

6. (Original) The method of claim 5, wherein the web-based model of the sub-component is a 3D image of the sub-component that may be manipulated by the user.

7. (Original) The method of claim 1, wherein establishing a web-based model of the component includes:

detecting a change to the engineering model of the component; and
updating the web-based model of the component based on the detected change.

8. (Canceled) The method of claim 1, wherein establishing a web-based model of the component includes:

lightening the engineering model; and
establishing the web-based model based on the lightened engineering model.

9. (Original) The method of claim 1, wherein the web-based model is a 3D image model.

10. (Original) The method of claim 1, wherein the web-based model includes a 3D image model of the component and textual data associated with at least one of physical, functional, and marketing characteristics of the component.

11. (Currently Amended) The method of claim 1, wherein performing a simulation of the web-based model includes:

providing, to the user, one or more options reflecting various simulation environments ~~associated with the work environment~~ that the web-based model may be simulated within;

receiving a selection from the user reflecting a selected simulation environment; and

performing a simulation of the web-based model in the selected simulation environment.

12. (Previously Presented) The method of claim 1, wherein the user operates a client system and providing the web-based model is performed by a server system connected to the client system over a network, and wherein performing a simulation of the web-based model includes:

allowing the user to control the operation of the web-based model using an input interface during a communication session between the client system and server system over the network; and

performing simulations of the web-based model in a simulation environment based on data received from the input interface.

13. (Original) The method of claim 2, wherein the simulation environment includes a simulated load and wherein performing a simulation of the web-based model includes simulating a manipulation of the simulated load by the web-based model.

14. (Original) The method of claim 13, further including:
providing, to the user, feedback data reflecting at least one of physical and functional characteristics of the web-based model based on the simulated manipulation.

15. (Original) The method of claim 2, wherein the simulation environment includes a simulated work environment reflecting any type of terrain, underwater, water surface, outer space, subterranean, and atmospheric work environment that may be associated with the configured web-based model, and wherein performing a simulation of the web-based model includes simulating operation of the web-based model in the simulated work environment.

16. (Original) The method of claim 15, further including:
providing, to the user, feedback data reflecting at least one of physical and functional effects of the web-based model based on the simulated operation in the simulated work environment.

17. (Currently Amended) The method of claim 1, wherein the simulation environment includes a simulated surface ~~in the work environment~~ and wherein performing a simulation of the web-based model includes simulating operation of the web-based model on the simulated surface.

18. (Original) The method of claim 17, further including:
providing, to the user, feedback data reflecting at least one of physical and functional characteristics of the web-based model based on the simulated operation.

19. (Currently Amended) The method of claim 2, wherein the simulation environment includes a type of the work environment and a work operation to be performed by the web-based model in the work environment.

20. (Previously Presented) The method of claim 19, wherein performing the simulation of the web-based model includes:

establishing a plurality of duplicate web-based models of the component; and

simulating a concurrent work operation of each of the duplicate web-based models in the work environment.

21. (Original) The method of claim 20, further including:

providing, to the user, feedback data reflecting characteristics of the duplicate web-based models during the simulated work operation.

22. (Original) The method of claim 20, further including:

providing, to the user, feedback data reflecting performance information associated with the work operation in the work environment.

23. (Original) The method of claim 20, wherein simulating the

work operation in the work environment further includes:

allowing the user to adjust the number of duplicate web-based models performing the work operation and to adjust the configuration of the duplicate web-based models.

24. (Original) The method of claim 2, wherein the simulation environment is a virtual repair environment.

25. (Original) The method of claim 24, wherein performing simulations of the web-based model includes:

allowing the user to perform a virtual repair of the web-based model in the virtual repair environment.

26. (Original) The method of claim 2, wherein the simulation environment is a virtual training environment and performing simulations of the web-based model includes providing instructional information to the user while the user operates the web-based model in the virtual training environment, wherein the instructional information may include at least one of image, voice, and textual information instructing the user on the operation of the web-based model.

27. (Currently Amended) A system for simulating one or more components, comprising:

a client system operated by a user; and

a server system, including:

a process for receiving configuration data from the client system reflecting a configuration of a component of a machine ~~that is configured to perform work operations in a work environment~~ selected by the user;

a process for lightening an engineering model of the component using a model reduction process;

a process for establishing a web-based model of the component based on the configuration data and ~~an~~ the lightened engineering model of the component;

a process for providing, to the client system, a simulation of the web-based model performing virtual operations in a simulated environment ~~associated with the work environment~~; and

a processor for executing the processes for receiving, lightening, creating, and providing.

28. (Original) The system of claim 27, wherein the process for providing includes a process for providing, to the client system, feedback data reflecting characteristics of the web-based model during the simulation.

29. (Original) The system of claim 27, wherein the process for establishing a web-based model of the component includes:

a process for detecting a change to the engineering model of the component; and

a process updating the web-based model of the component based on the detected change.

30. (Canceled) The system of claim 27, wherein the process for establishing a web-based model of the component includes:

a process for lightening the engineering model; and

a process for establishing the web-based model based on the lightened engineering model.

31. (Previously Presented) The system of claim 27, wherein the process for providing a simulation of the web-based model includes:

a process for providing, to the client system, one or more options reflecting various simulation environments that the web-based model may be simulated within;

a process for receiving a selection from the client system reflecting a simulation environment selected by the user; and

a process for performing a simulation of the web-based model in the selected simulation environment.

32. (Original) The system of claim 31, wherein the process for providing a simulation of the web-based model includes:

a process for receiving input data from the client system; and
a process for manipulating the web-based model in the selected simulation environment based on the input data.

33. (Original) The system of claim 27, wherein the process for performing a simulation of the web-based model includes a process for simulating operation of the web-based model in a simulation environment, wherein the simulation environment includes a simulated work environment reflecting any type of terrain, underwater, water surface, outer space, subterranean, and atmospheric work environment that may be associated with the configured web-based model and wherein the process for performing a simulation of the web-based model includes a process for simulating operation of the web-based model in a simulated work environment.

34. (Original) The system of claim 33, further including:
a process for providing feedback data reflecting at least one of physical and functional characteristics of the web-based model during the simulating operation.

35. (Original) The system of claim 27, wherein the process for providing the simulation of the web-based model includes:
a process for establishing a plurality of duplicate web-based models of the component; and

a process for simulating a selected work operation in the selected simulation environment using the duplicate web-based models.

36. (Original) The system of claim 35, further including:

a process for providing feedback data reflecting characteristics of the duplicate web-based models during the simulated work operation.

37. (Original) The system of claim 27, wherein the process for

providing a simulation of the web-based model includes a process for simulating a virtual repair of the web-based model in a simulation environment.

38. (Currently Amended) A computer-readable medium including

instructions for performing a method, when executed by a processor, for simulating one or more components, the method comprising:

establishing an engineering model of a component of a machine

~~that is configured to perform work operations in a work environment;~~

lightening the engineering model using a model reduction process;

receiving selection data for configuring the component from a user;

establishing a web-based model of the component based on the

selection data and the lightened engineering model; and

performing a simulation of the web-based model.

39. (Currently Amended) The computer-readable medium of claim 38, wherein performing a simulation of the web-based model includes:

performing a simulation of the web-based model in a simulation environment such that the user may manipulate the web-based model over a network to perform virtual operations ~~associated with the work environment.~~

40. (Previously Presented) The computer-readable medium of claim 38, wherein the method further includes:

receiving the selection data from the user over a network; and
providing, to the user over the network, feedback data reflecting characteristics of the web-based model during the simulation.

41. (Original) The computer-readable medium of claim 38, wherein establishing a web-based model of the component includes:

detecting a change to the engineering model of the component; and
updating the web-based model of the component based on the detected change.

42. (Canceled) The computer-readable medium of claim 38, wherein establishing a web-based model of the component includes:

lightening the engineering model; and
establishing the web-based model based on the lightened engineering model.

43. (Previously Presented) The computer-readable medium of claim 38, wherein performing a simulation of the web-based model includes:

providing one or more options reflecting various simulation environments that the web-based model may be simulated within;

receiving a selection from the client system reflecting a simulation environment selected by the user; and

performing a simulation of the web-based model in the selected simulation environment.

44. (Previously Presented) The computer-readable medium of claim 43, wherein performing a simulation of the web-based model includes:

receiving input data; and

manipulating the web-based model in the selected simulation environment based on the input data.

45. (Original) The computer-readable medium of claim 39, wherein the simulation environment includes a simulated work environment reflecting any type of terrain, underwater, water surface, outer space, subterranean, and atmospheric work environment that may be associated with the configured web-based model and wherein performing a simulation of the web-based model includes simulating operation of the web-based model in the simulated work environment.

46. (Previously Presented) The computer-readable medium of claim 45, further including:

providing, to a user, feedback data reflecting at least one of physical and functional effects of the web-based model based on the simulated operation in the simulated work environment

47. (Original) The computer-readable medium of claim 38, wherein performing the simulation of the web-based model includes:

establishing a plurality of duplicate web-based models of the component; and

simulating a selected work operation in the selected simulation environment using the duplicate web-based models.

48. (Previously Presented) The computer-readable medium of claim 47, further including:

providing, to a user, feedback data reflecting characteristics of the duplicate web-based models during the simulated work operation.

49. (Original) The computer-readable medium of claim 38, wherein performing a simulation of the web-based model includes simulating a virtual repair of the web-based model in a simulation environment.

50. (Currently Amended) A method for simulating one or more components of a work machine, comprising:

establishing an engineering model of a component of a work machine that includes at least one power source for enabling the machine to travel and perform work operations;

receiving selection data for configuring the component from a user over a network;

establishing a web-based model of the component based on the selection data and the engineering model; and

performing a simulation of the web-based model.

51. (Currently Amended) A system for simulating one or more components of a work machine, comprising:

a client system operated by a user; and

a server system, including:

a process for receiving configuration data from the client system reflecting a configuration of a component, selected by the user, of a work machine that includes at least one power source for enabling the machine to travel and perform work operations ~~selected by the user~~;

a process for establishing a web-based model of the component based on the configuration data and an engineering model of the component;

a process for providing, to the client system, a simulation of the web-based model; and

a processor for executing the processes for receiving, creating, and providing.